

**REMARKS**

Claims 1-16 and 18-31 are pending in this application. By this Amendment, claims 16, 26 and 31 are amended. Support for amendments to claims 16 and 31 can be found at least in Fig. 6 and the corresponding description. No new matter is added.

**I. Allowable Subject Matter**

Applicant appreciates the Office Action's indication that claims 11, 18 and 27 include allowable subject matter.

**II. The Claims Define Patentable Subject Matter**

**A. Rejection of Claim 31**

The Office Action rejects claim 31 under 35 U.S.C. §102(b) over U.S. Patent No. 5,163,118 to Lorenzo et al. (Lorenzo). This rejection is respectfully traversed.

Claim 31 is not anticipated by Lorenzo. Lorenzo does not disclose "a maximum width of maximum cross-section of the optical waveguide member being longer than a width of a lower surface of the optical waveguide member," as recited in independent claim 31.

Lorenzo only discloses an integrated optical circuit that has components of the uniform length, as shown in Figs. 2A-2I and 3A-3E. That is, Lorenzo discloses that the maximum width of the maximum cross-section of the optical waveguide member is equal to the width of a lower surface of the optical waveguide member. Thus, Lorenzo does not disclose the optical waveguide recited in claim 31.

Thus, for at least these reasons, independent claim 31 is patentable over Lorenzo. Withdrawal of the rejection is thus respectfully requested.

**B. Rejection of Claims 1-10, 12-16, 19-26 and 28-30**

The Office Action rejects claims 1-10, 12-16, 19-26 and 28-30 under 35 U.S.C. §103(a) over Lorenzo in view of U.S. Patent No. 5,402,511 to Malone et al. (Malone). This rejection is respectfully traversed.

Claims 1-10, 12-16, 19-26 and 28-30 would not have been rendered obvious by Lorenzo in view of Malone. First, a *prima facie* case of obviousness for independent claims 1 and 9 has not been established. The Office Action acknowledges that Lorenzo and Malone do not disclose the method as recited in claims 1 and 9. However, the Office Action asserts that "it would have been obvious to one of ordinary skill in the art at the time this invention was made to develop a particular method for the disclosed apparatus of the cited reference."

However, the Office Action failed to provide any suggestion or motivation, some reasonable expectation of success or any reference that teaches or suggests the claimed features to support the §103(a) rejection as required by MPEP §2143. Thus, because the Examiner has failed to provide any teaching or suggestion, the Examiner is relying on improper hindsight reasoning. Accordingly, the §103(a) rejection of claims 1 and 9 is unreasonable.

Second, neither of the references teaches or suggests an optical waveguide that includes "a maximum width of maximum cross-section of the optical waveguide member being longer than a width of a lower surface of the optical waveguide member," as recited in independent claim 16. As discussed above, Lorenzo only discloses an integrated circuit that has components that are equal in length. Further, Malone does not remedy Lorenzo's deficiencies. Malone is cited by the Office Action only for its alleged teaching of a convex member having a low refractive index. Thus, neither of the applied references teaches or suggests the optical waveguide recited in independent claim 16.

Finally, neither of the applied references teaches or suggests "a second convex member provided on the substrate, the second convex member being disposed in parallel with the first convex member," as recited in independent claim 26.

As shown in Fig. 3E of Lorenzo, the asserted second convex member (reference 46) is formed on the asserted optical waveguide member (reference 38), which is formed on the

asserted convex member (reference 34). Thus, Lorenzo does not disclose the second convex member recited in independent claim 26. Further, Malone does not remedy Lorenzo's deficiencies. As discussed above, Malone is cited by the Office Action only for the alleged teaching of a convex member having a low refractive index. Thus, neither of the applied references teaches or suggests the optical waveguide recited in claim 26.

Thus, for at least these reasons, independent claims 1, 9, 16 and 26 are patentable over Lorenzo and Malone. Further, claims 2-8, 10, 12-15, 19-25 and 28-30, which variously depend from claims 1, 9, 16 and 26, are also patentable over Lorenzo and Malone for at least the reasons discussed above with respect to claims 1, 9, 16 and 26, as well as for the additional features they recite. Withdrawal of the rejection is thus respectfully requested.

### **III. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-16 and 18-31 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Randi B. Isaacs  
Registration No. 56,046

JAO:RBI/hms

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**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

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